APJ 2700

| TRANSMITTAL LETTER (General - Patent Pending) | Docket No. 6065-73063 |
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In Re Application Of: **Dezonno**

| Serial No. | Filing Date | Examiner | Group Art Unit |
|---|---|---|---|
| **09/172,362** | **10/14/1998** | **Agdeppa, Hector A.** | **2642** |

Title: **NUERAL NETWORK FOR CONTROLLING CALLS IN A TELEPHONE SWITCH**

TO THE COMMISSIONER FOR PATENTS:



Transmitted herewith is:

**Appellant's Answer to the Examiner's Response Under 37 CFR Section 1.193(b)(1) Postcard**

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Dated: **March 11, 2004**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Dezonno, Anthony J. Art Unit: 2642

Serial No.: 09/172,362

Filed: October 10, 1998

For: NEURAL NETWORK FOR CONTROLLING CALLS IN A TELEPHONE SWITCH

Do NoT Enter

Examiner: Agdeppa, H.

Attorney Docket No.: 73063



APPELLANT'S ANSWER TO THE EXAMINER'S RESPONSE UNDER 37 CFR §1.193(b)(1)

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Examiner's Answer of January 13, 2004 and in support of the applicant's Notice of Appeal filed September 5, 2003, the applicant responds as follows:

Response

In the Examiner's Response, the Examiner assert that "as admitted by Appellant on p. 9 of the specification . . . neural networks are commonly used in telecommunications networks because they afford a platform that can learn, react, and provide more exact call routing/call execution" (Examiner Answer, page 5, line 18 to page 6, line 3). However, a review of page 9 of the specification reveals that this statement by the Examiner is false or, at the very least, misleading.

In the Examiner's Response, the Examiner asserts that "if a system 'learns' a desired set of relationships, then of course, training occurs as well . . . In order for a system to 'learn', that system must monitor, analyze, absorb, an ultimately learn how to properly react to those certain aspects of the system that are to be 'learned.' . . . This is effect learning" (Examiner's Answer, page 6, lines 9-13). The difficulty with this arguement, of course, it that it presumes the premise of the argument. That is, the assertion presumes that learning has occurred whereas, there is no teaching or suggestion that this is the case.

The Examiner asserts, that "At the very least, such an operating manner is close to how a neural network operates" (Examiner's Answer, page 6, lines 13-14). However, the Examiner fails to provide any basis for this assertion.

The Examiner asserts next that "See Col. 5, lines 24-29

of Viloset et al. wherein it is taught that the ACD 'stores in its memory statistical information . . . over a period of time . . . And from the information gathered over that period of time 'learns' how to react and 'train' itself into reacting appropriately" (Examiner's Answer, page 6, lines 14-17). However, again, the Examiner provides fails to provide any basis for his assertion that "learning" or "training" has occurred. Moreover, the next paragraph suggests that the Examiner is wrong. In this regard, Viloset et al. asserts that "The tandem computer 34 utilizes the inbound and outdial call information to calculate the number and the rate of inbound calls received compared to the rate outbound calls . . . The call pacing algorithm at the tandem computer uses the compared rate of inbound versus outbound calls to automatically control the rate of outdial calls" (Viloset, col. 5, lines 30-37). Since the tandem computer uses the "compared rate of inbound versus outbound calls to automatically control the rate of outdial calls", Viloset doesn't even appear to use the statistical information relied upon by the Examiner.

The Examiner assert next that "If Viloset et al. merely reacted immediately without taking in information 'over a period of time' perhaps it could be argued that no learning or training is taught, but such is clearly not the case" (Examiner's Response, page 6, lines 18-20). The Examiner in this case seems to be ignoring the fact that statistics are always collected over a period of time. As

such, the Examiner's comment is irrelevant.

The Examiner asserts that "Claim 1 . . . is read upon by Viloset et al. and Applicant's admission of the use of neural networks as well as by Bigus et al. and Donnelly since a neural network is not claimed in any sort of detailed fashion and whose operation can be likened to that of Viloset et al, and since 'resource relationships' and 'distributing resources' too are extremely broad limitations having many possible interpretations" (Examiner's Answer, page 6, line 20 to page 7, line 5). It is noted, in this regard, that the Examiner has not demonstrated any prior use or suggestion of the use of neural networks in the context of the claimed invention and, instead, appears to be rejecting the claim based upon his perception of the claim rather than upon the prior art. This perception is supported by the Examiner's agreement (Examiner's Answer, page 2, lines 12-13) that the issue raised on appeal (Appeal Brief page 4, line 23 to page 5, line 1) is correct.

The Examiner asserts next that "As to Appellant's argument A regarding claim 1 . . . Appellant states 'from the description of the invention and Responses, the resource distributed by the ACD are the agents of the ACD.' [Emphasis added] . . . the features upon which the Appellant relies are not recited in the claims" (Examiner's Answer, page 7, lines 7-11). It is noted in this regard however that, under exemplary embodiments of the invention, agents are in fact resources of the ACD. As such, the

feature are recited in the claims.

The Examiner asserts that "Applicant has argued that the instant invention is distinguished from Viloset et al. because Viloset et al. deals only with calls and not agents . . . However, just as taught by Viloset et al. which uses an ACD to distribute calls to agents, the instant invention as well uses an ACD to distribute calls to agents" (Examiner's Answer, page 7, line 20 to page 8, line 3). In may be noted in this regard, that while the context of the claimed invention is important, the distribution of calls to agents is not the claimed invention.

The Examiner assets next that "Viloset et al. teaches that 'the ACD 12 continuously sends information relating to changing call processing conditions at the switch 14 . . . This information is needed . . . to effectively predict the optimum outdial call procedure . . . Clearly, call processing conditions can be read as the claimed 'call processor loading' and so in fact Viloset et al. reads on the present invention" (Examiner's Answer, page 8, lines 4-10). However, even if the changing call processing condition did read on "call processor loading", it would still be call processor loading merely used for the control of predictive outdialing.

The Examiner asserts next that "The Bigus and Donnelly references were used merely to show the obviousness of using a neural network in a call distribution system and how closely related, if not exactly, the functionality of the Viloset et al.

system is to those systems that actually use the neural network" (Examiner's Answer, page 8, lines 11-14). It may be noted, in this regard, that even if Viloset et al. were exactly the same as Bigus et al., it would only teach predictive outdialing. Similarly, even if Viloset et al. were exactly the same as Donnelly, the result would only teach distribution of calls, not resources.

The Examiner asserts next that "even a neural network must be programmed to learn, or train . . . Any system or platform such as an ACD must be programmed in some sense as any computer must be programmed" (Examiner's Answer, page 8, lines 20-22). This comment by the Examiner, however, depends upon the level of abstraction one goes to. If one goes back to the beginning of time (i.e., the beginning of neural networks), then inevitably, there would have been programming involved in the creation of the first neural network. However, once created, a neural network need only learn. In this regard, page 9, lines 24-27 of the specification refers to the use of pre-existing neural networks, therefore the programming referred to by the Examiner is not relevant. Further, even the step of adjusting the weighting of a neural network (specification, page 14, lines 3-7) does not rise to the level of programming, as such term is understood in the art.

The Examiner assert next that "while Viloset et al. may be programmed with algorithms, those algorithms program the system of Viloset et al. to 'learn' over a period of time, how to

react/adapt to changing call processing loading/conditions" (Examiner's Answer, page 8, line 22 to page 9, line 3). However, this comment appear to be merely the opinion of the Examiner and should not be relevant to the question of patentability.

The Examiner asserts next that "Appellant's assertion that the outdialing algorithm of Viloset et al. functionality may only be changed by reprogramming is accurate . . . However, this is not issue . . . The issue instead is how the system of Viloset et al. reacts to changing call processing loads which, as discussed above, it clearly does by 'learning' over a period of time . . . Of course, factors that may be considered may have to be reprogrammed in an algorithm, but again such is not the issue at hand here" (Examiner's Answer, page 9, lines 3-8). However, the position taken by the Examiner would appear to be internally inconsistent. For example, each algorithm of Viloset et al. would be assumed to provide a certain functionality. As admitted by the Examiner, to change the functionality of an algorithm, it must be reprogrammed. If the algorithms of Viloset et al. must be reprogrammed to change their functionality, then the position being taken by the Examiner is apparently that the learning of Viloset et al. occurs through reprogramming. This is entirely different than the learning of a neural network.

The Examiner asserts next that "Appellant also, without pointing to any specific limitation in the claims as to what a

neural network is, relying only on the specification of the instant invention, blindly asserts that Viloset et al. does not have a neural network (p. 7 of Appellant's appeal brief), and that the Bigus and Donnelly references either teach the wrong learning and training or teach no training at all . . . As discussed above, this is an erroneous assertion" (Examiner's Answer, page 9, lines 9-13).

It is noted in this regard that page 9 of the specification clearly identifies an exemplary embodiment of a neural network to be used under the invention. Viloset et al. and Donnelly do not use the term "neural network" or provide any description of any functionality that is consistent with the presence of a neural network. The Examiner apparently acknowledges this by failing to identify any structure or methods within Viloset et al. that provides the same or equivalent functionality of a neural network. As discussed above, algorithms that provide a fixed functionality and which must be reprogrammed to alter their functionality are not the same as or equivalent to neural networks. Since Viloset et al. and Donnelly are based upon the use of algorithms, they do not teach or suggest the use of neural networks.

Similarly, Bigus et al. is directed to a neural network that performs predictive outdialing. Nowhere within the combination of Viloset, Bigus et al. and Donnelly is any teaching or suggestion of a neural network that distributed resources as under the claimed invention.

The Examiner asserts next that "Appellant addressed only claim 1 of the instant invention, examiner would like to note that claims 1-9, for example, suggest what Appellant has claimed as a desired resource relationship, i.e., ratio of inbound to outbound calls, a number of answered calls, the number of available agents, etc. . . . While Appellant has suggested that the only resource of consequence in the instant invention are agents (p. 5 of Appellant's appeal brief), these dependent claims indicate such is not the case . . . They instead indicate that these factors and considerations are also resources that the Appellant's invention consider and uses in its system (Examiner's Answer, page 9, line 21 to page 10, line 6). In this regard, the Examiner's comment appears to be irrelevant. An applicant is entitled to claim any other concepts the inventor wants to so long as they are used with the central inventive concept.

In concluding paragraphs, Examiner goes to great effort in an attempt to establish that what is not taught by the cited references would be known to those of skill in the art (Examiner's answer, page 10, line 7 to page 11, line 9). However, relying upon knowledge generally available to those of skill in the art does not excuse the Examiner's failure "to establish, with evidence or reasoning, why one of skill in the art would have been led by the relevant teaching of the applied references to make the proposed combination (Appeal Brief, page 13, lines 10-13).

For the foregoing reasons, reversal of the rejections of claims 1-24, as now presented, is believed to be in order and such action is earnestly solicited.

For any of the foregoing reasons, allowance of claims 1-24, as now presented, is believed to be in order. It is respectfully requested that this Board reverse the decision of the Examiner in all respects.

Respectfully submitted,

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By

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